Critique of the Common Service Centre Scheme

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The Common Service Centre scheme aims to establish nearly three lakh rural internet kiosks across India. A recent evaluation study, however, found poor demand among users and delayed roll-out of government-to-consumer services, causing losses and attrition among private operators of the scheme. There is space, therefore, for greater engineering of public good outcomes by tying financial incentives to computer education goals.

The success of the information technology (IT) industry in the early 1990s led to a consensus on the possibility of using India's commercial success in IT for development (Arora et al 2001, Department of IT 2006). This consensus was in keeping with the growing information and communication technology (ICT) movement across the globe (Kuriyan and Ray 2009). The plethora of ICTD projects around the world have been divided (Chaudhuri 2011) into four main categories: supplying computer hardware, providing internet access through public telecentres, using public telecentres as delivery points for e-services of various kinds including e-government, and lastly, the use of mobile telephones for development. Between 2006 and 2011, the World Bank provided more than $3 billion of funding for ICT projects in over 80 countries.1

Public telecentres, in particular, have been in vogue for the better part of 15 years. However questions remain in each of the four major areas of study to which the literature on telecentres has been devoted: commercial viability, social inclusiveness, forms of use, and downstream impacts (Sey and Fellows 2009). In India, early ICTD projects included those in Kerala (Akshaya), Madhya Pradesh (Gyandoot), Haryana (Drishtee) and Tamil Nadu (Sustainable Access in Rural India or SARI). Enthused by the evidence, some anecdotal, of early successes, the Government of India allocated Rs 22,140 crore ($4.92 billion) in budgetary allocation in the Tenth Five-Year Plan (2002-07) for implementation of e-government. Further, India proposed the National E-governance Action Plan for implementation during the period from 2003-07. The Common Service Centres (CSCs) were to be:

[T]he front-end delivery points for Government, private and social sector services to rural citizens of India. The idea is to develop a platform that can enable government, private and social sector organisations to integrate their social and commercial goals for the benefit of rural populations in the remotest corners of the country through a combination of IT as well as non-IT services.

The CSC scheme, approved by the government in September 2006 with an outlay of Rs 5,742 crore (roughly $1.28 billion) over a period of four years, is a strategic cornerstone of the National E-Governance Plan (NeGP). It aims to establish one lakh, now expanded to three lakh, rural internet kiosks across the country at the rate of one for every six villages (now expanded to one for every village panchayat).3 This is the largest telecentre programme in the world.

Our study of CSCs set up in Uttar Pradesh (UP) and Meghalaya corroborates the findings in the literature on telecentres around the world. Such telecentres are prone to unviability (Benjamin 2001; Arora 2005; Kuriyan and Ray 2009), social exclusivity (Adomi 2007; Haseloff 2005; Kumar and Best 2006; Kuriyan et al 2008), and usage dedicated towards personal and social needs rather than development goals (Menon et al 2006).

In this commentary, we elaborate upon our findings in the context of CSCs in UP and Meghalaya and then focus on the optimal structural design of the public-private

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partnership (PPP) scheme most appropriate for the stated development objectives. The article is organised as follows: we start by outlining the details of the PPP scheme used for CSCs, describe the research methodology and the results, and conclude with a discussion of the optimal structural design of the scheme.

The CSC Scheme

Under the chosen PPP arrangement, the private sector is responsible for setting up and running the CSCs. States are divided into one or more zones, each consisting of around 100 telecentres. A private entity, the Service Centre Agency (SCA), selected at a zonal level, is charged with a certain pace of roll-out and a minimum number of hours of internet uptime. The government has prescribed one important rule of operation, namely, that the SCA operate telecentres through village-level entrepreneurs (VLEs).

The governance of the project is done by a central programme office, run by a private sector agency Infrastructure Leasing and Financial Services (ILFS), under the aegis of the department of IT (DIT). At a state level, designated public sector agencies called State Designated Agencies (SDAs) are in charge. The minimal specification of requirements seems to be based on the premise that a commercially oriented telecentre will automatically achieve development goals for the common man.

In general, CSCs are equipped with one or two PCs, a printer, scanner, photocopier, an uninterruptible power source or UPS, a net connection (either VSAT, fibre or wireless), and a digital camera. The government has promised to provide two complementary inputs for the running of telecentres: a broadband network for connectivity and state data centres to provide the necessary inputs for e-governance services. In most states, the broadband network is being built by the government telecommunications operator Bharat Sanchar Nigam Limited (BSNL). The state data centres are the responsibility of the respective state governments.

The services offered by telecentres can be divided into three types:

1. Connected services are those that require internet connectivity.
2. Digital services are those which require the use of digital equipment like the PC, photocopier, or camera, but not connection to the internet.
3. Finally “other services” are those that the SCA or the VLE introduces to enhance their business. These include microcredit services, general retail, and insurance sales.

Of the total project cost of Rs 5,742 crore, Rs 1,600 crore is to come from the central and state governments, and the remainder from private parties. The financial contribution of the government is in the form of a revenue subsidy that is decided on the basis of bidding. The subsidy is meant to tide over the SCAs for four years, at which point it is expected that e-governance services will be operation-alised and the subsidy will no longer be required. The government allows the private parties to pass on the financial burden to the VLEs, and does not monitor the relationship between the two. Currently, VLEs are employees in some zones and franchisees in others.

The structure of the scheme has parallels with the structure adopted in other parts of the world like South Africa (Girardet 2000) and El Salvador (Kheïladi 2001). The establishment of a network of franchised telecentres under the auspices of a national or regional operating company has some attractive features. It can offer economies of scale in equipment procurement and support to franchise owners, for example, in the form of a start-up package, an operating manual, recruitment and training guidelines, and standard payment vehicles such as pre-paid cards. The latter can increase turnover, as when urban dwellers purchase prepaid cards for rural relatives to facilitate two-way communications. This model can also ensure common quality of service standards. Despite all the benefits of consolidation, however, best practice also recognises the need for local entrepreneurs to run the CSC, identify needs, and bond with the community. The Indian scheme adheres to best practice in creating a role for the VLEs.

Research Method

Our field research was conducted in Meghalaya and UP, two states that had not adopted ICTD prior to the CSC scheme. The aim was to select states that would be significantly different in terms of e-business readiness and degree of e-governance implementation compared to early adopters, and therefore more representative of the country at large. We also wanted to select states where the development challenge was acute, not only in terms of per capita indicators, but also in terms of overall size. UP and Meghalaya make for a good combination because the business models adopted by the SCAs in these two states are quite different. In Meghalaya the SCA, Basix, has adopted an employee model where the VLE is a salaried employee of the SCA, at least initially. The SCA in UP, Srei Sahaj, has adopted a franchisee model by where the VLE bears the entire capital cost, partly in the form of a loan mediated by the SCA.

In UP, two districts from the eastern belt were selected: Rae Bareli and Lucknow. Rae Bareli is an “e-district”, whereas Lucknow is not. E-district refers to a district where some online government to consumer services (G2C) like online caste, domicile, or age certificates have been introduced on a pilot basis under the NEGP. Setting up such e-districts was one of the mission mode projects of the NEGP. There were no e-districts in Meghalaya during the time of our study. West Khasi and West Garo districts were chosen based on their heterogeneity in terms of development indicators and ease of connectivity.

A sample of 29 VLEs was chosen, eight from Meghalaya and 21 from UP. The breakup between Meghalaya and UP is roughly in proportion to the number of CSCs to be set up in the two states. A total of 442 respondents were surveyed, at an average of just over 15 per VLE. The choice of community respondents was conducted through stratified random sampling, based on whether the respondents was a user or non-user of CSC. Overall, a total of 260 users and 182 non-users were sampled. The survey was conducted between November 2009 and June 2010.

Findings

We found that the need for and affordability of telecentre services are low. Services are priced high, and hence telecentre usage is skewed towards high-income
users. Yet, despite high prices, telecentres are not able to be commercially viable. Data from the auctions used to outsource telecentre projects indicate a winner’s curse. The data on the roll-out of telecentres also show the poor health of the scheme as a whole.

**Poor Demand:** The absence of literacy, digital literacy, local language content and relevant applications are all huge barriers to the adoption of telecentre services. Respondents were asked if they perceived a need for the specific services offered by the cscs. Those who perceived a need were further asked if the services were affordable. Table 1 summarises the results.

The perceived need for internet services is low in both Meghalaya and UP, but especially so in UP. Table 2 indicates that in terms of socio-economic indicators, the two states are similar.

It is possible that the greater proportion of agricultural respondents in UP leads to the lower need being expressed there. Further, given that most internet and digital content is in English, the lack of knowledge of the English script is an additional handicap. In Meghalaya, in contrast, the local languages are taught in the Roman script. The lack of perceived need is a result of a combination of poor content (for example, a lack of jobs posted online), poor awareness of services (for example, not knowing that train tickets could be booked online saving a day’s trip to town), genuine lack of need (for example, not needing e-ticketing because the volume of train travel in Meghalaya villages is low). Also there is a lack of overall literacy and digital literacy, with overall literacy levels at 63.3% and 57.6% in Meghalaya and UP respectively as opposed to 90.9% in Kerala (Table 2). Information on digital literacy is not available.

Within UP, the perceived need for internet services is higher in the e-district of Rae Bareli than in Lucknow, where e-governance services have not been introduced. This indicates that the demand for internet services could be triggered by relevant content and applications. Among internet services, the perceived need as well as affordability of entertainment-based services is higher than the demand for non-entertainment services, including email, in both Meghalaya and UP. Among those who perceive a need for internet services, the percentage who can afford them is quite high: 57% in Meghalaya and 45% in UP. This indicates that telecentre users belong to the high-income category in the village, and that telecentres are not fulfilling their original intention of providing services for the common man.

**Financial Viability of Telecentres**

Telecentres appear to enjoy considerable market power. In Meghalaya, all the cscs are monopolists in the provision of internet services in their area. A quarter of the cscs are the only providers of digital computer-based services like typing, printing, and faxing. As expected, the prices of internet services are as high and in some cases, higher than in urban areas. In UP, the price differential is driven by premium pricing for services during load-shedding. The high prices have resulted in the use of telecentres by the relatively well-off in the village.

However, despite the high prices, our survey indicates that Indian telecentres are struggling to achieve sustainability. Figure 1 (p 21) shows the profitability of vle’s in Meghalaya and UP.

On average, after imputing a salary cost for the vle’s time, cscs in both Meghalaya and UP are not recovering their
operational costs. Operational losses are lower in the e-districts of UP compared to non-e-districts, in part due to greater revenues from internet G2C services.

One of the major challenges for telecentres are the high costs, and the unreliability of connectivity. This is due to difficult terrain, high costs of power, and the lack of a business case for connectivity service providers. In Meghalaya, the terrain makes VSAT the only feasible option in many CSCs, increasing both capital and operating expenses.

The provision of G2C services could have fuelled demand for the internet. It appears that even though the national scheme was expressly designed to subsidise VLEs only till G2C services were forthcoming, the VLEs and to some extent the SCAs acted under the assumption that G2C services would arrive soon. The heartburn due the lack of G2C services is particularly severe in UP, where the bidding resulted in a negative subsidy. An official stated:8

In UP there was negative bidding of Rs 10 per CSC per month. Around 3,000 units were set up and therefore a total of Rs 30,000 per month would be the government’s income from these revenue subsidies, but the major question arises what is the government doing with this money?

After four years of the operation of the CSC scheme there was no sign of the promised G2C services. According to Meena Chaturvedi, chief executive officer (CEO) of the Srei Sahaj e-village initiative,9 “There is a basic resistance within the government to give G2C services as it will bring transparency into the system”.

The poor health of CSCs is clearly reflected in the high attrition level of VLEs on the one hand, and the poor macro-level performance of the national scheme. In Meghalaya, by early 2010, 51 of the 162 VLEs had left, according to a report submitted by the Meghalaya SCA, Basix, to the DIT.10 The report also shows that only 62 of the 175 CSCs rolled out are connected to the internet.

The SCA for eastern UP, Srei Sahaj, was mandated to roll out 29,000 CSCs, of which it has rolled out 22,000, with only 15,000 having internet connectivity.11

**Bidding in Telecentre Auctions**

A look at the bidding data obtained from the DIT is illuminating.12 All the states were divided into zones. The maximum allowable bid in each zone was Rs 7,500. On an average, the number of bidders was three, though it varied from one to nine. In around 23% of zones, there was only one qualified bidder. The average winning bid was Rs 1,358.23, but the standard deviation was as high as Rs 1,423.66. Around 44% of the winning bid values were either zero or negative. Around 22% of the winning bids were strictly negative, with the negative subsidy ranging from Rs 1 to Rs 900. The difference between the first bid and the second bid ranged from zero to Rs 9,684, with the average difference being Rs 979.51. Thus the winning subsidy was on average 58% of the second lowest subsidy bid, indicating the winner either had unique capabilities or an excess of optimism. The performance of the VLEs on the ground amply demonstrates that it was more of the latter!

Having discussed the performance of telecentres, we turn to a discussion of the optimal structural design for the scheme. The use of reverse auctions in the provision of universal access to telecommunications services was suggested (Milgrom 1996) to minimise the subsidy burden and promote competition. It was believed that a transparent auction mechanism promotes efficiency and ensures a high quality of service. Internationally, data on reverse auctions held in Australia, Chile, Colombia, India, Nepal, and Peru show that “reverse auctions can reduce subsidies paid for universal service and that in general subsidies for universal service have been too high” (Wallsten 2009: 376).

However, common value auctions,13 characterised by a high measure of uncertainty, are always susceptible to the winner’s curse, or “post-decision surprises” (Harrison 1984). High uncertainty, relating to the future of a market that is undergoing paradigmatic transformation under the joint impacts of government, civil society and entrepreneurial action, is inherent in the provision of telecommunications services in emerging rural markets. In the case of CSCs, the uncertainty related to the pace of roll-out of e-government services, the availability of connectivity and power, and the willingness of the rural population to adopt the internet.

Auctions in such contexts are carefully designed with one important feature being the staging of bidding over several rounds. Multiple rounds of bidding are believed to allow market information to emerge. However multi-round auctions are susceptible to collusion unless there are a sufficiently large number of bidders (Albano and Spagnolo 2005 Subramanian 2009). When the number of bidders is low, as was in the case of the CSCs, where the average number of bidders was only three, multi-round bidding becomes unworkable. The remaining option of a single round sealed bid auction is vulnerable to the winner’s curse.

However auctions must not be eschewed, only redesigned. Public production of basic services is subject to state failure. At the same time, allocation of public service to private parties without an auction is not transparent. Certain elements of the cost structure,
like connectivity, could be removed from the terms of the auction, and provided as a fixed subsidy. Further, lofty goals inspired by urban standards must be avoided. For example, the extant scheme mandates high levels of network uptime. This is financially burdensome, and unrealistic in the context of present demand. On the other hand, developing digital readiness such as through computer training does not find any explicit mention. The result is the commercial unviability of telecentres, and an inability to enthuse the rural population to adopt the new medium. The solution is to redesign the telecentre scheme to make it less risky for the private sector, and to tie the private sector to some output that would directly increase the ability of the rural populace to use computers.

Simultaneously one must protect the vles by moving them into an entrepreneurial position in a phased manner. In El Salvador, for example, Infocentros, a non-profit organisation established to promote the information society, borrowed $10 million interest-free from the government to build 100 telecentres within a two-year period. These for-profit telecentres were to be run as franchises-cum-business-incubators. However, in the initial phase, each telecentre was to be established and operated directly under Infocentros’ management (Khelladi 2001). This was mandated as part of the design of the scheme unlike in India where the contract is determined by each SCA. Only when the centre achieves profitability, could it be sold to a franchisee. Eventually, 90 telecentres were to be run as private franchises, while 10 were to remain under Infocentros’ control, acting as nodes, providing assistance and services to the franchisees, through training, technical support and maintenance.

It is good to see that the DTR has worked proactively to reduce risk for the local entrepreneur. In the second phase of the scheme, to increase the number of telecentres from 1 lakh to 3 lakh, DTR has promised a fixed sum for connectivity, and a fixed salary payment for the vle. However, incentives directly linked to computer training are still not being provided.

There is tremendous potential for using high-speed internet access to provide basic services like education and health, as also market information. India is currently in the process of laying a national broadband network and is aiming to connect every village by 2017. The most viable way to access these services is through csces equipped with broadband access, large monitors and the necessary support staff.

The groundwork for optimal utilisation includes building the necessary skills in the target population to take advantage of the services. We have seen that these skills are sorely lacking at present. In our survey six out of 10 vles in Meghalaya and 18 out of 20 vles in UP regarded lack of skills among users as an important bottleneck. Five out of 10 vles in Meghalaya and 14 out of 20 vles in UP regarded lack of awareness as an important bottleneck. Interestingly, nine out of 10 vles in Meghalaya and 15 out of 20 vles in UP felt that they themselves...
lacked the computer skills necessary to carry out their job. Therefore computer literacy is an important function the government needs to enable through the telectrenes.

In Akshaya, a Kerala-based project that started as an e-literacy initiative, a training charge of Rs 120 per person was fixed by the government (International Institute of Information Technology Bangalore 2005). Of this, Rs 80 was collected from the village panchayat, and Rs 20 each from the block and district panchayats. The remaining Rs 20 was to be collected from the recipient of the service. The telectrenes were tasked with creating 100% digital literacy in their districts in a stipulated period of time. This amounts to a targeted subsidy for e-literacy that would incentivise the kiosk operator to provide the intended services for which the kiosk was set up by the government. Hence we recommend that the offer tie private players to a certain target with respect to computer education and provide a subsidy for each trained participant. The bidding by operators could be for the per participant subsidy required.

The design of the telescheme in India is symptomatic of a paradigm of development that believes that “optimal” financial provisioning for basic services constitutes the most important, if not the only role for government. The amount of the subsidy, the choice of the provider, and the subsequent outcomes of the provision of services in terms of reaching the intended beneficiaries are to be left to market forces. Yet, the case of the Indian telescheme show that the intended public good is often not achieved with the prevailing paradigm. Without losing sight of the benefits of liberalisation, a space needs to be reclaimed for greater engineering of welfare schemes to achieve the public good.

REFERENCES


NOTES

1 World Bank, “About the ICT Sector Unit”, Information and Communication Technologies, accessed 29 August 2011: http://go.worldbank.org/VK4GDY6P0
7 This is the implicit cost of the contribution of the VLE in UP, and an explicit cost for salaried VLEs in Meghalaya.
8 Interview conducted in Lucknow, 22 March 2010.
9 Interview date 5 May 2010.
11 Interview with Srei Sahaj sources, as above.
12 Based on unpublished data by DIT.
13 Auctions where the value of the object is common across bidders are called common value auctions. The susceptibility to the winner’s curse remains in the case of hybrid auctions, where the value is partly common and partly private, i.e., unique to the bidder.

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